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ABSTRACT

This paper describes empirically tested strategies for containing mailed questionnaire costs while maximizing survey response rates. Survey focus, critical to gaining respondent interest and completion of the survey instrument, should be selected on the basis of the theme of the study in order to reduce survey length and yield more in-depth and potentially useful information on selected topics. To help insure that the survey focus interests respondents, the appropriate study population should be carefully selected. Psychometric considerations should determine whether addressing a random sample or entire population is cost effective. Appearance and organization of the survey, as well as its form, style and presentation should be tailored to arouse the interest of the target group. The mailing process should include a premailing letter or phone call, an initial mailing, a postcard mailing, a second cover letter and replacement questionnaire, and a certified mailing or telephone follow-up. Two case studies revealing differential successes with variations to traditional survey research are reported and sample surveys are appended. (CK)

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Balancing Resources and Response Rates in Mailed Questionnaire Research: The Challenge of Conducting Successful Alumni Surveys While Containing Costs

Nancy L. Ahson, Ph.D.
Assistant Director, Institutional Assessment

Karen M. Gentemann, Ph.D.
Director, Institutional Assessment

George Mason University
Fairfax, VA 22030-4444

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for Management Research, Policy Analysis, and Planning

This paper was presented at the Thirty-Sixth Annual Forum of the Association for Institutional Research held in Albuquerque, New Mexico, May 5-8, 1996. This paper was reviewed by the AIR Forum Publications Committee and was judged to be of high quality and of interest to others concerned with the research of higher education. It has therefore been selected to be included in the ERIC Collection of Forum Papers.

Jean Endo
Editor
AIR Forum Publications

Abstract

Surveying alumni via mailed questionnaires is an integral component of most assessment and institutional effectiveness programs. The substantial resources employed in mailed questionnaire research requires that every survey project yield valid and reliable results that are useful to educational stakeholders and instill public confidence in the survey research conclusions. Ultimately, useful survey results rely on a high proportion of respondents returning their questionnaires. This presentation will share empirically tested strategies for containing mailed questionnaire costs while maximizing survey response rates.

I. Introduction

Surveying alumni about their post-graduation experiences as well as their educational experiences while enrolled is an integral component of most assessment and institutional effectiveness programs. To date, most higher education institutions rely on mailed questionnaires to survey their alumni. At metropolitan campuses, where student integration and involvement on campus may be limited (Astin, 1993), researchers are further challenged in their attempts to maximize response rates among alumni who may have minimal interest in maintaining contact with their baccalaureate granting institution. Low survey response rates, however, threaten the reliability and validity of survey research projects and effect departmental, institutional and public confidence in the conclusions drawn from the results. The increasing resources expended in the creation, distribution and analysis of mailed questionnaires make it essential that every survey project yield results that are useful to internal and external educational stakeholders. Useful survey results flow not only from a well designed questionnaire and a clearly defined survey population, but ultimately, from how many respondents complete and return their questionnaires.

II. Purpose

At the start of every survey research project, the researcher is faced with a myriad of decisions from which population to survey, when to survey, what is the best design for the survey and ways to distribute initial and follow-up mailings. How the researcher answers these questions regarding survey development and implementation will affect the number in the population likely to respond, the costs of the survey project and ultimately, the validity of the study. This paper and presentation will share those techniques for survey development and implementation that appear in

the literature and others that have been empirically tested by the researchers which serve to control mailed survey costs while maximizing response rates.

II. A Literature Review & Some Tested Guidelines - Survey Development and Implementation

Excellent references are available to aid the researcher in the construction and distribution of mail surveys (for example, Dillman, 1978; Suskie, 1992). The *Total Design Method to Mail and Telephone Surveys* (Dillman, 1978), reported an average response rate of 74 percent for 48 survey projects. Response rates with specialized populations, such as a cohort of alumni from a particular institution, were reported as high as 90 percent. Deviations from the *Total Design Method* with regard to quality of the questionnaire, the mailing process, conducting surveys in large metropolitan areas, or conducting general population surveys tend to lower survey response rates (Dillman, 1978).

While the Total Design Method appears to yield outstanding questionnaire return rates, the mail costs alone may be beyond the budgetary constraints of most assessment and institutional researchers for whom surveying alumni is only a small component of their multifaceted research agendas. Suskie (1992) wrote, "Few of us have an open-ended budget. The rest of us need to consider how extensive a project we can undertake given our funds" (p. 13). For example, the postal rates alone for following the *Total Design Method* in 1996, assuming a survey population of 2,500 and a 70% response rate, postal costs for distributing and collecting the questionnaire are estimated at $ 5,985. Add to postal rates, additional expenses such as survey creation, duplication, staff time for mailing, data entry/scanning, analysis and report development and the costs may soon exceed the resources available and make mailed surveys impractical at most institutions.

III. The Survey Research Process

IIIA. Survey Focus

Survey focus is critical to gaining respondent interest in and completion of the survey instrument. To achieve focus, consider the following before beginning: What is the theme of the study?; What are the parameters around which alumni will be surveyed; and Can the data be collected in any other manner? Considering these questions will provide a framework that will help to insure useful results when the research project is complete.

Typically, alumni surveys attempt to "cover the waterfront" and include topics on employment, educational and co-curricular campus experiences, completed or intended education since graduation, satisfaction with campus services, current family and home life, civic activities, expected future giving to the institution and other areas. A more focused alumni survey will help to reduce the length of the survey and yield more in-depth and potentially useful information on selected topics. Further, focus might help to increase the response rate assuming these topics or foci of the survey are of interest to the respondent.

To help insure that the focus of the survey is of interest to survey respondents, the appropriate study population should be carefully selected. Most often, alumni surveys are conducted one, three, five, ten and fifteen years after graduation. What may be appropriate to ask one cohort may not be appropriate for another. For example, alumni one year after graduation could discuss their campus involvement, rate campus services and discuss their first post-graduation employment. If however, there is interest in how many alumni eventually pursue advanced degrees and how work fields or employment changes over time, then those graduates 5-20 years after graduation are a more appropriate study populations than more recent graduates.

Finally, consider whether data regarding the theme or focus of the survey is available in other existing documents or files or whether there are easier, less costly ways to gather the data. The time and expense of survey via mail suggests that all others means to collect or gather the information should be exhausted before beginning a mail survey.

IIIB. Who Is Surveyed?

At the beginning of each survey project, the survey researcher must decided whether to survey full populations or to select an appropriate, random sample. Reasons to select a sample include reducing costs, increasing convenience (often related to size of the population), or studying a theme across time. Sampling, especially at institutions with particularly large graduating classes, serves to lower survey costs by reducing copying and mailing charges and decreasing staff time involved in preparing and tracking the returns. Further, when researchers are interested in a very specific theme or research question, the responses of alumni across multiple years might be valuable in order to gain a fuller perspective or to note changes in cohort responses over time. In this instance, random samples of participating cohorts are desirable in order to make the execution of the project manageable. Random samples are appropriate and sometimes necessary when contacting alumni.

While costs might be saved by surveying a substantially smaller random sample of a population, there are several valid reasons for surveying entire populations when conducting alumni surveys. Plans to disaggregate the results of an institutional survey to the school, department or program level; interest in analyzing survey results by select variables or subpopulations; and anticipated low response rate; interest in minimizing sampling error; and the

expectation that a substantial proportion of alumni addresses are incorrect are all reasons for surveying the entire population.

Often, the primary reason for surveying full populations is so that at the completion of the project there are enough responses to analyze, evaluate and draw conclusions from the information collected. For example, if the researcher wants to share departmental or program information such as the number of alumni currently employed in their major field or the proportion of students from a particular major who immediately went on to graduate or professional school, then there must be enough respondents from each program/department to provide useful information. Similarly, if multiple general education approaches exist at an institution and analyses by those who completed each of the programs will be conducted, then the researcher needs enough responses from each of these groups to insure valid analyses.

Psychometrically there are reasons for contacting the entire population. First, if through past experience or other factors, low or modest response rates are expected, then the prudent researcher would adjust upward the number of alumni in the sample group. It is often the case that this "adjusted" sample number nears the number in the actual population (Gentemann and Ahson, 1993 and 1994). When the number in the sample begins to near the number in the population, then the researcher should choose to contact the entire population. Similarly, there exists an inverse relationship between sampling error and the size of the population surveyed. The more of the cohort surveyed, the less likely that "unexplained" or "baffling" survey results are a result of sampling error.

Finally, at most higher education institutions, alumni address bases contain many incorrect and undeliverable addresses and serve to limit the number of potential respondents. Again, a full population survey may be used to ensure enough responses for the results of the study to be useful.

Diseaggregating results, low response rates, analyses by particular subpopulations, psychometric issues and institutional data bases that house a substantial proportion of incorrect addresses are significant reasons for surveying at or near the number in the entire population. Considering the many internal and external stakeholders interested in the perceptions and experiences of alumni, researchers are prudent to error on the side of including as much of the full population in the study as possible. Unfortunately, costs are likely to increase.

IIIC. Survey Appearance and Organization

In the arena of alumni surveys, the researcher doesn't necessarily have to start from scratch. There are a number of "off the shelf" surveys that might be purchased and used. Before developing a "local" survey, these should probably be considered due to the investment of time and resources needed to develop one's own survey. However, when researchers find the "off the shelf" surveys are not specific enough to their institutions or do not have the focus or theme they had intended they often develop their own. If an alumni survey will be developed locally there are several suggestions for enhancing the survey's appearance and organization that may result in ease of response for the respondent and a greater likelihood that the survey will be returned.

Scannable questionnaire vs. more traditional forms

Today, a variety of scannable software packages and hardware might substantially reduce the amount of data entry time required prior to analyzing the survey. Many scannable forms, however, are stark and uninviting in their appearance. They often lack interest and appeal compared to booklet designs and graphics that might be added to the more traditional, hand processed alumni surveys. Further, scannable forms need to be kept free from folds or tears. The method of survey distribution and return becomes a paramount issue in the survey process and may

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affect the costs and timing of mailings. Surveys that can not be folded will require a larger mail envelope and return envelope and may be processed by the Post Office more slowly than regular business size envelopes. Bulk or third class mail also delays the mail process even though it does decrease postage costs.

Style and Presentation

The style and presentation of the survey and individual survey items are important to generate interest and encouraging a response. Layout of survey items should be more vertical than horizontal, incorporate white space and use generous margins. Using smaller type will yield a more professional look and instead of an 8.5 x 11 layout, a booklet style survey can add interest. The use of graphics and headers for new sections add eye appeal, and directions to help respondents make transitions between types of scales and subject areas keeps respondents from feeling confused. Further, by carefully reviewing the survey to eliminate unnecessary questions the researcher helps to avoid respondent fatigue and distraction.

Nothing substitutes for a pilot test of the questionnaire to make sure that it is an appropriate length and that directions and language are clear. Similarly, having others proofread the questionnaire and using the best paper and reproduction services affordable will help to convey to others that the survey is important.

IIID. The Mailing Process

A Proven Process - The Total Design Method

As previously indicated, the survey development and mailing process highlighted by Dillman (1978) in the Total Design Method has resulted in response rates that are generally 70%

and higher. This method provides instructions on everything from survey layout and design, preparing a cover letter, initial contact with respondents to the final follow-up. Specifically, the mail steps in this method include:

- 1. Premailing process. This process includes an informational letter or phone call to potential respondents to inform them of their selection in a particular study, some background on and the importance of the study to be conducted, assurance of confidentiality and when the survey might arrive.
- 2. Initial Mailing. This is the first mailing of the survey and cover letter. Each cover letter contains an original signature, assures the respondent of confidentiality, conveys the importance of the study, and highlights the importance of each recipient responding in a timely way. The mailing is prepared in an attractive manner and is sent first class mail.
- 3. Postcard Mailing. This is the first follow-up that is sent via first class mail 7-10 days after the survey was mailed. A phone number is given in case the respondent needs another copy of the survey.
- 4. Second cover letter and replacement questionnaire. Sent approximately three weeks after the postcard mailing. Much like the first cover letter, but an increased emphasis is placed on the response of the survey recipient.
- 5. Certified mailing or telephone follow-up.

The success of the *Total Design Method* in gaining sufficiently high response rates and thereby, aiding in the validity of the study, suggests that researchers should use this or a similar method whenever possible. If, however, available resources preclude researchers from following the Total Design Method completely, the researcher will need to make trade-offs in the survey

process considering the time, money and staff available to support the project. Bulk (third class) mailing is less expensive than first class, but the time involved in sending mail may be prohibitive. In urban areas it may be 3-5 weeks from time of delivery to the postal office until the first potential respondent receives a survey. Time delays associated with mailing may affect wording in the cover letter and inadvertently make the date on the cover letter outdated. Further, multiple mailings done via bulk mail make it difficult to gage the follow-up mailings and additional staff are need to bundle and prepare the mailing in zip code order and other groupings to receive the lower postal rate.

First class mail, although more expensive, has advantages with speed of delivery (often 1-2 days for the first local recipient to receive the survey), ease of timing follow-up mailings, better service by U.S. Postal Service (USPS) in tracking undeliverable mail, and less staff time involved in mail preparation. If it is decided that first class mail is worth the extra costs, researchers will need to take steps to reduce the weight of the mailing as much as possible. Table 1 compares First Class and Bulk Mailings on several areas.

Table 1.

A Comparison of the Advantage and Disadvantages of First and Third Class Mail

First Class Mail	***Bulk (Third class) Mail***
Speed of delivery (in as little as one day)	Slower Delivery (as slow as 3-5 weeks)
Easier to time follow-up mailings	Unsure when to begin follow-up mailings
Relatively easy mail preparation	Place mail in zip code order and "bundle" mail
First class is a priority for USPS	Bulk mail gets delivered when time is available
Address corrections and unknowns are returned quickly to sender	Fewer "address corrections" or "unknowns" are returned to sender
Staff time for mail preparation limited	Staff time can be substantial
More costly	Lower cost

IV. A Case Study

Frustrated by lower than acceptable survey response rates in previous surveys along with rising costs, the Office of Institutional Assessment at George Mason University decided to experiment with a variety of survey development and implementation strategies. These strategies have lead to increasingly satisfactory response rates over time. This case study involves two alumni survey projects at a metropolitan, doctoral granting, commuter institution. At the university, 60% of any graduating class are transfers to the institution and the vast majority work full or part-time off campus. Limited campus integration while enrolled may further influence alumni commitment and contact with the institution.

This case study examines the steps of developing and implementing alumni surveys and extracting those techniques of survey development, layout, production and distribution that have had the most positive and negative effects on response rates while containing costs. What follows is a presentation of two survey projects which, for the purposes of this paper, are called the "Gold Medal Project" and the "Bronze Medal Project". The choices made in the design and implementation of these two projects resulted in two very different outcomes. The Gold Project ended with a 50% response rate compared to a more typical 30% rate in the Bronze Project. For survey researchers, these outcomes can be the difference between the acceptance or rejection of survey results.

IVA. The Survey Research Process (Foci, theme, appropriate study population)

- **The Gold Project** - Alumni survey conducted three years after graduation that covered academic major, employment history, educational experience, educational status, campus experiences and current places of residence and employment.

- **The Bronze Project** - Alumni survey conducted five years after graduation covering such topics as education and employment, campus experiences, employment and residence history, leisure and community activities, educational status, institutional satisfaction, and experience in their major department. Inserted into the survey was an employment survey (primarily open-ended items) created by the Career Development Office.

IVB. Who is Surveyed?

- **The Gold Project** - Full population of 1992 graduates in 1995.

- **The Bronze Project** - Full population of 1988 graduates in 1993.

IVC. Survey Appearance and Organization (Scannable vs. Traditional form, style and presentation, survey length.)

- **The Gold Project** - Two 8 ½" x 11" sheets of paper were folded to form a 6" x 9" 4 page booklet and photocopied on soft grey paper. The entire front page was graphically designed and included the year of the graduating class being surveyed and the date of the survey. Further, the inside front page of the booklet served as the "cover letter". Survey questions did not start until page two and include only five questions pertaining to academic major and department experience (i.e, that experience at the institution to which our alumni most frequently identify). There were a total of 31 items (half the length of the survey in the Bronze Project) and contained eight qualitative or open-ended items.

- **The Bronze Project** - There were a total of 64 questions on the survey (15 were open-ended or qualitative items) directions were brief with few lead-ins to new sections or headers for new sections were used. Very few graphics were used and only a small graphic header was used at the top of the first page. The size of the survey was created using an 11" x 17" sheet of paper folded to form a 4 sided 8" x 11 ½" survey. The survey was printed on white paper.

IVD. The Mailing Process

First Mailing

- **The Gold Project** - First class mail was used. A 6" x 9" clasp envelope was used to hold the survey and business reply envelope. No cover letter was sent. Instead a "letter to alumni" was created on the inside front cover of the survey and signed by the President.

The cover letter was eliminated in order to keep the weight of the mailing at or under 1 ounce, thereby, saving on postal charges.

- **The Bronze Project** - Bulk/Third class mail was used. A special, graphically designed clasp envelope was used to hold the alumni survey, cover letter and business reply envelope. Further, a one page questionnaire from the Career Development Office was also enclosed.

Post Card Mailing (1st follow-up)

- **The Gold Project** - Received 2 weeks after first mailing via first class mail.

- **The Bronze Project** - Received 5 weeks (due to the slowness of bulk mail deliver on the first mailing) after original mailing via bulk mail.

Replacement Questionnaire (2nd follow-up)

- **The Gold Project** - Replacement questionnaire and business reply envelope were sent shortly after the postcard mailing via bulk mail. Again, no cover letter was used. Instead, surveys were stamped with the note "We've received a lot of questionnaires, but have you returned yours?"

- **The Bronze Project** - Replacement questionnaire, second cover letter and business reply envelope were sent via bulk mail eight weeks after original mailing.

Case Study Summary

The alumni survey projects presented in the Bronze Project (30% response rate) and the Gold Project (50% response rate) differed substantially on survey foci, study population, when the population was surveyed, survey size, appearance and mailing procedures.

Survey Design and Layout. The survey described in the Bronze Project was twice as long (64 questions) as the Gold Project, covered many more topic areas, and used few graphics, headers, and directions between sections. The Bronze Project also contained a one page questionnaire from the Career Development Office. This questionnaire was inserted into the middle of the survey further increasing the number of requested responses by alumni. The Bronze Case

contained 15 open-ended questionnaire items and some might have been difficult to answer. For example, one question read, "Many higher education institutions, particularly metropolitan campuses, are rethinking their missions. What do you think colleges should do to prepare students for the 21st Century?"

The questionnaire presented in the Gold Project had a graphically designed cover, opened to a letter from the president, and began with only five questions on the first page that asked alumni about their major and departmental experience. This questionnaire contained half as many open-ended items as the Bronze Project, contained clear directions between sections and generally had a more open and uncluttered feel. Finally, the Gold Project surveyed graduates three years after graduation in the early spring. The Bronze Project surveyed graduates five years after graduation in the summer.

Mailing and Mail Preparation Bulk mail was used to help reduce costs in the Bronze Project, but frustrated attempts to time the mailings and track incorrect addresses and returns. The larger size, outgoing mail envelope may have been more difficult for the USPS to process and probably resulted in even slower mail delivery time and fewer incorrect addresses returned to the sender.

The Gold Project was mailed first class (for the 1st mailing and the post card follow-up). To keep the weight of the mailing below one ounce, a separate cover letter was excluded from both the first and second mailings of the questionnaire. Instead a "letter" from the president was printed on the inside front cover of the survey. For the second mailing of the questionnaire, the same "letter" was used, but the front of the survey was stamped with the message "We've received a lot of questionnaires, but have you mailed yours?" To further reduce costs for the overall project, the

second mailing of the questionnaire, sent soon after the postcard, was mailed via bulk rate/third class mail.

Project Costs The costs associated with the Bronze Project ($3,816.83) and the Gold Project ($3,687.03) were similar. (Project costs for the Gold and Bronze Project have been detailed in Appendix C.) The Gold Project, which used first class mail for the 1st questionnaire and post card, was actually lower. There are a couple of reasons for this. First, the USPS does not have a third class postcard rate. As a result, the .266 bulk rate is actually higher than the .20 rate for a first class postcard. Therefore, postcards should always be mailed first class. Second, from the outset it was decided that first class mail would be used in the Gold Project due to the speed of delivery and better tracking of nondeliverable surveys. Several suggestions were generated in order to keep the weight of each piece of mail to one ounce or less. In the end, the decision was made to experiment with excluding the cover letters. Judging by the response rate in the Gold Project, excluding the formal cover letters did not appear to hinder response rates. In fact, alumni might have appreciated receiving one less item in the mailing.

Staff Time and Convenience. Past survey projects revealed that a significant portion of staff time is spent in folding the survey, cover letter and business reply envelope to fit into the outgoing mail envelope. In both the Gold and the Bronze Project attempts were made to minimize staff time involved in preparing the survey project for mailing. The Bronze Project contained an oversized envelope in which the cover letter, survey and business reply envelope were placed. None of the contents had to be folded. Similarly, in the Gold Project, neither the survey or the business reply envelope was folded since a 6" x 9" clasp envelope was chosen as the outgoing mail envelope. Further, since the Gold Project contained no cover letter, there was one less piece of mail to stuff.

To further decrease staff time spent in handling the mailing portion of the survey project, the mailing labels for the Bronze Project were ordered in zip code order. This decreased staff time in sorting and organizing the mail in order to receive the third class/bulk rate. (Organizing a mailing in zip code order when the labels have not been requested preordered can take 1-2 days.) Staff did spend time coordinating and organizing their work in order to keep the project in zip code order. Further, all mail was sent out on the same day in order to insure the best postal rates. Zip code ordering was not necessary for the survey mailed via first class (the Gold Project) which meant that staff could work where convenient and work on the project in between phone calls, waiting for analytical programs to "run", etc. Further, mail could be sent out when ready instead of in large quantities. For the second mailing, each survey in the Gold Project received a stamped message. In the Bronze Project, time was taken to prepare, copy and stuff a second cover letter.

V. Summary

The purpose of this paper was to share empirically tested strategies for increasing survey response rates while containing costs. Existing literature (Dillman, 1978) suggests that even higher response rates are possible and yet, following this method may be beyond the budgetary constraints of most survey researchers. For example, the authors of this paper have never used a "pre-survey notification" contact prior to conducting the survey and have never been able to afford a final follow-up (i.e., after the 2nd mailing of the questionnaire) either by phone or certified mail.

This paper highlighted two case studies which revealed differential successes with variations to traditional survey research. Those variations that resulted in the highest response rate (The Gold Project) while containing costs included:

- Not using a cover letter in order to reduce the weight of the mailing and make first class mail more affordable.
- Limiting survey length and adding "white" space, particularly at the beginning of the survey.
- Narrowing survey focus and beginning the questionnaire with relatively easy to answer questions regarding academic major and departmental experience.
- Using graphics frequently for interest and eye appeal and using graphic headers to divide sections.
- Directions and context were provided frequently.
- After using first class mail for the mailing of the questionnaire and the post card follow-up, third class mail was used for the questionnaire in the second follow-up to reduce mailing costs.
- Finally, surveying alumni in the spring, three years after graduation resulted in a better response rate than surveying in the summer, five years after graduation.

This paper provides empirically tested examples of variations to the "traditional" survey process that help to contain costs while maintaining or increasing response rates to at or near 50%. There are numerous other variations to balance response rates and costs that should be further investigated. Ultimately, a goal of surveying alumni should be to conduct an affordable study that insures enough responses to help insure a valid study. A high response rate helps to insure that the project adequately reflects the opinions and attitudes of the population under study and helps to instills institutional and public confidence in the conclusions drawn from the survey project.

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APPENDICES A. B and C

APPENDIX A

"THE GOLD MEDAL PROJECT"

Alumni Survey

1992 Graduates

George Mason

Institutional Assessment
Spring 1995

March 22, 1995

Dear George Mason Alumnus,

This is a time of rapid change at George Mason University. As a 1992 GMU graduate your reflections on the quality of your experiences at GMU are valuable to me, to other administrators and to the faculty as we plan for the next century. This survey provides you with an opportunity to let us know what we've done well and where we need to improve.

It is important that you return this survey so that we receive enough responses from graduates in your major to provide summaries to departments. Only those departments which have a substantial number of graduates responding will receive important feedback necessary for departmental planning and curricular improvement.

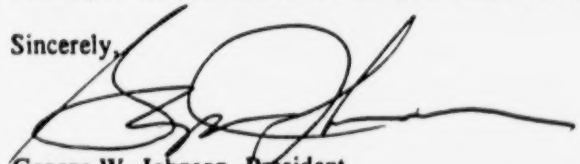
Your answers to these questions are strictly confidential. This questionnaire has an identification number for research purposes and so that we may check your name off the mailing list when your questionnaire is returned. Your name will never appear on the questionnaire.

The results of this research will be made available to the University community. You may receive a copy of the results by writing "copy of results requested" on the back of the enclosed envelope.

To return your questionnaire, place it in the enclosed business reply envelope. If you have any questions, please contact Dr. Karen Gentemann, Director of Institutional Assessment at (703) 993-8836.

Thank you for your assistance and your timely response.

Sincerely,



George W. Johnson, President

Directions: Throughout this questionnaire, please write in or circle the most appropriate response. When complete, fold and place the survey in the business reply envelope. No postage is necessary.

Your Academic Major

Q1. Which of the following baccalaureate degrees did you receive from GMU?

1. B.A.
2. B.S.
3. B.F.A.
4. B.S.N
5. B.M.
6. B.S.Ed.
7. B.I.S.

Q2. What was your GMU academic major?

_____

Q3. What was your primary reason for selecting this major?
(Circle one only)

1. likelihood of employment
2. financial reward
3. interest/talent in the area/subject matter
4. parental or family influence
5. faculty, advisor or mentor influence
6. work or other experience in the area
7. other: _____

Q4. Overall, please rate the quality of faculty in your major department.

1. Excellent
2. Above Average
3. Average
4. Below Average
5. Poor

Q5. Overall, how satisfied were you with the academic department from which you graduated?

1. Very satisfied
2. Somewhat satisfied
3. Dissatisfied
4. Very Dissatisfied

Employment History

Q6. What is your current employment status?

1. Employed full-time
2. Employed part-time, 20 or more hours a week
3. Employed part-time fewer than 20 hours a week
4. Homemaker
5. Unemployed, seeking work (go on to question Q17)
6. Unemployed, not seeking work (go to question Q17)

Q7. How many jobs have you held since graduation? _____

Q8. What is your current job title? _____

Q9. How satisfied are you in your current field of work?

1. Very satisfied
2. Somewhat satisfied
3. Somewhat unsatisfied
4. Not satisfied

Q10. How closely would you say your current field of work is to your GMU major?

1. Very closely related
2. Somewhat related
3. Somewhat unrelated
4. Not related

Q11. In your present position, how helpful are skills that were acquired in your major?

1. Very helpful
2. Somewhat helpful
3. Somewhat unhelpful
4. Not helpful

Q12. What type of organization do you currently work for?

1. private nonprofit
2. private for profit
3. self employed
4. federal government
5. state or local government
6. other: _____

Q13. Name of the organization or agency for whom you currently work:

_____

Q14. How prepared do you feel compared to other college graduates in your place of employment who graduated about the same time that you did?

1. Better prepared
2. Equally prepared
3. Less prepared
4. Don't know/not applicable

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Q15. What percentage of your work day is spent using computer technology?

1. 10% or less
2. 11-25%
3. 26-50%
4. 51-75%
5. 76-100%

Q16. Where did you learn your computer skills? *(Circle all that apply.)*

1. GMU classes
2. GMU computer labs
3. on the job
4. at home, from family/spouse
5. high school classes
6. from friends/neighbors
7. I do not have computer skills

Educational Experience

Q17. Did you transfer to GMU from either a two or four year higher education institution?

1. Yes --> Where did you transfer from? _____
2. No

Q18. Which method(s) did you use to complete your general education requirements? (Circle all that apply)

1. took courses that looked interesting
2. selected courses that were available or fit in my schedule
3. I transferred to GMU with the majority of my credits completed
4. the PAGE *(Planned Alternative for General Education)* program
5. other: _____

If you are not currently employed, go on to question Q20.

Q19. Valuable knowledge and skills can be learned in a variety of settings. How valuable were each of the following types of learning experiences in preparing you for your current employment?

Very	*Some-what*	*A Little*	*Not at All*		*Don't know or Not Applicable*
4	3	2	1	Upper level courses in your major	0
4	3	2	1	Upper level courses outside your major	0
4	3	2	1	General education courses	0
4	3	2	1	Campus clubs, organizations, activities	0
4	3	2	1	Summer employment while in school	0
4	3	2	1	Part or full-time employment while enrolled	0
4	3	2	1	Internships/cooperative education	0
4	3	2	1	Study abroad experiences	0
4	3	2	1	other: _____	

Q20. Rank each of the following potential outcomes of a college education by placing a "1" next to the most important outcome, a "2" next to the second most important, and so on.

Rank

____ development of general knowledge and intellectual skills
____ readiness for employment through the development of a specific skill/knowledge base
____ life-long friends, mentors, etc.
____ other: _____

Q21. Alumni in previous years have told us that the areas listed below are those most important to job performance. Indicate how you learned each area by placing one number on each line below.

1=On the Job	**3=In or Out of Class Study**
2=Student Activities	**4=I did not learn this**

Areas Important to Job Performance

____ The ability to work cooperatively in groups
____ The ability to work independently
____ Leadership in small and large groups
____ Intellectual skills *(analytic, problem solving, logical reasoning, etc.)*
____ Writing effectively
____ Reading w/ a high level of comprehension
____ Mathematical/statistical manipulations
____ Skills learned in your major area including lab, research, etc.
____ Awareness of global issues
____ Computer skills/literacy
____ Understanding different people, philosophies and cultures
____ Academic major content, knowledge or information
____ Speaking effectively in small and large groups
____ Broad understanding of different fields of knowledge
____ Application of scientific principles and methods
____ Lab or research skills
____ Foreign language skills

Educational Status and Future Plans

Q22. If you have continued your education beyond the baccalaureate complete the grid below by indicating when you completed or intend to complete any of the following degrees or certifications. If you do not intend to pursue formal education beyond your undergraduate degree, check this box ☐ and go on to question Q25.

DEGREE OR CERTIFICATION	SUBJECT OR MAJOR	COLLEGE OR UNIVERSITY	FILL IN THE DATE	
			Have Completed	*Will Complete*
Master's Degree				
Professional Degree *(i.e. law, medicine, etc.)*				
Doctoral Degree				
Second Bachelor's				
Technical (e.g. CPA) or teaching certif.				
other: please identify				

Q23. Has/is your post-undergraduate enrollment been primarily

1. full-time?
2. part-time?

Q24. How well did your coursework at GMU prepare you for your post-undergraduate studies?

1. Very well
2. Well
3. Not well

Campus Experiences

Q25. At any time, did you live in university operated housing?

1. Yes ----> How many semesters? _____
2. No

Q26. How active were you in student clubs or organizations?

1. Very active
2. Somewhat Active
3. Only active a little
4. Not at all active

Q27. Since you first enrolled at GMU, did you ever take time off from GMU (e.g. one or more semesters) prior to graduation?

1. Yes --> What were your reasons for taking time off? _____

_____

2. No

Tell us about . . .

PLACES OF RESIDENCE AND EMPLOYMENT

1. Washington, D.C.
2. Northern Virginia*
3. U.S. *(excluding MD, D.C. and VA)*
4. Maryland
5. Other Virginia
6. International *(outside U.S.)*

(Cities of Alexandria, Fairfax, Falls Church, Manassas/Manassas Park; Arlington, Fairfax, Loudoun & Prince William Counties)

Q28. Of those places listed above, where do you reside? _____

Q29. Of those places listed above, where are you employed? _____

Q30. What do you think GMU has done that has contributed most positively to your education?

_____

_____

Q31. What would you change about GMU that would have made your educational experiences here better?

_____

_____

Thank You!

George Mason University

APPENDIX B
"THE BRONZE MEDAL PROJECT"

Alumni Survey, Five Years After Graduation
1988 Graduates

Directions: Throughout this survey, please circle the number of the most appropriate response or fill in the blank.

I. Education And Employment

How important are the following <u>in performing your job</u>? ***(If you are not currently employed, go to question #25.)***

Very Important	*Important*	*Somewhat Important*	*Not Important or Not Applicable*	
				I. Education, Skills and Knowledge
4	3	2	1	*Q1.* academic major content, knowledge, information
4	3	2	1	*Q2.* skills learned in your major area including lab, research, etc.
4	3	2	1	*Q3.* a broad understanding of different fields of knowledge
4	3	2	1	*Q4.* intellectual skills (analytic, problem solving ability, logical reasoning, etc.)
4	3	2	1	*Q5.* awareness of global issues
4	3	2	1	*Q6.* reading with a high level of comprehension
4	3	2	1	*Q7.* writing effectively
4	3	2	1	*Q8.* mathematical or statistical skills and manipulations
4	3	2	1	*Q9.* application of scientific principles and methods
4	3	2	1	*Q10.* lab or research skills
4	3	2	1	*Q11.* computer skills/literacy
				II. Interpersonal and Group Skills
4	3	2	1	*Q12.* understanding different people, philosophies and cultures
4	3	2	1	*Q13.* ability to work independently
4	3	2	1	*Q14.* ability to work cooperatively in groups
4	3	2	1	*Q15.* leadership skills in small or large groups
4	3	2	1	*Q16.* speaking effectively in front of small or large groups
4	3	2	1	*Q17.* foreign language skills
				III. Others
4	3	2	1	*Q18.* GMU degree
4	3	2	1	*Q19.* internship or cooperative experience
4	3	2	1	*Q20.* skills learned in GMU extra-curricular experiences (clubs, activities, volunteer experiences, etc.)
4	3	2	1	*Q21.* Other: _____

Q22. Overall, for those areas you rated as "very important" above, in which areas did GMU prepare you particularly well? (Write the appropriate item numbers on the lines below.)

Q#: _____ Q#: _____ Q#: _____

Q23. Again, for those areas rated "very important" were there any in which you wish you had better preparation?

Q#: _____ Q#: _____ Q#: _____

Q24. How prepared do you feel compared to other college graduates in your place of employment who graduated at about the same time that you did?

1. better prepared
2. equally prepared
3. less prepared
4. don't know/not applicable

II. GMU Experiences

Q25. Did you work while attending GMU?

1. yes ----------> Q26. Approximately how many hours a week did you work? _____
2. no *(If no, go on to question #29.)* Q27. Did you work primarily ----> 1. on campus 2. off campus

Q28. What was your primary reason for working?

_____

Q29. Did you ever live in university operated housing?

1. yes ------> Q30. If yes, for how many semesters? _____
2. no

Q31. Whether you answered "yes" or "no" above, discuss why you would or wouldn't encourage new students to live on campus. _____

Q32. How involved were you in student organizations, clubs or activities? 1. Very much 3. A little 2. Somewhat 4. Not at all

Q32a. If you were "not at all" involved, what prevented you from being more involved?

_____

Q33. Did you ever stop out (leave GMU) for one or more semesters before graduating? 1. Yes 2. No

Q33a. If yes, why did you stop out? _____

III. Employment and Residence History

Q34. Are you currently employed 1. full-time (35 or more hours per week) 2. part-time (34 or less hours per week) 3. I am not currently employed

Q35. Places of Employment/Residence (Write the appropriate number on each line below.)

a. Among those areas <u>listed below</u>, where are you currently employed? _____ *(skip if you are not currently employed)*
b. Among those areas <u>listed below</u>, where do you currently live? _____

1 = Northern Virginia* **3 = Maryland** **5 = U.S. (excluding VA & MD)**
2 = Other Virginia **4 = Washington, D.C.** **6 = International (outside U.S.)**

(Cities of Alexandria, Fairfax, Falls Church, Manassas/Manassas Park; Arlington, Fairfax, Loudoun& Prince William Counties)

IV. Leisure and Community Activities - How often (daily, weekly, monthly, two or three times a year, rarely/not at all) in the last 12 months have you

Daily	*Weekly*	*Monthly*	*Two or Three times a year*	*Rarely/ Not at all*	
5	4	3	2	1	*Q36.* read a newspaper or magazine article
5	4	3	2	1	*Q37.* read a book for enjoyment
5	4	3	2	1	*Q38.* visited a museum or gallery
5	4	3	2	1	*Q39.* attended a concert or play
5	4	3	2	1	*Q40.* volunteered service to a political, social or charitable organization
5	4	3	2	1	*Q41.* worked on an art, music or theater piece for <u>personal enjoyment</u>
5	4	3	2	1	*Q42.* worked on an art, music or theater piece for the purpose of <u>display/performance</u>
5	4	3	2	1	*Q43.* been active in community/civic activities
5	4	3	2	1	*Q44.* been active in a professional organization
5	4	3	2	1	*Q45.* took a leadership role in a volunteer activity
5	4	3	2	1	*Q46.* participated in a sports activity for personal enjoyment

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George Mason University

GMU Employment Survey of the Class of 1987-88

The information you provide on this Employment Survey will be used by the Career Development Center to inform students and faculty of the career patterns of GMU alumni. Occupation and organizational information will be compiled by college/school and majors and will be distributed to University departments. If you would like to become involved in offering career information and advice to GMU students, you may indicate an interest on this survey. Additional information will be sent to you.

Last Name _____ ID # _____ - _____ - _____

First Name _____ GMU Major: _____ Degree: _____

Employment If you are employed, please complete this section.

- Position Title: _____ Occupation Code: _____ (See Below)
- Name of Organization: _____ Business Code: _____ (See Below)
- Address: _____
  _____ (City/State/Zip)
- Circle the number of the range in which your current annual salary falls.
  1. $19,999 or under
  2. $20,000 - 29,999
  3. $30,000 - 39,999
  4. $40,000 - 49,999
  5. $50,000 - 59,999
  6. $60,000 or over
- Would you be willing to give information/advice to GMU students about your career and/or employer? _____ yes _____ no
  If yes, what is the address to which the Career Development Center can send information about this service:
  _____
  _____

OCCUPATIONAL CODES

ADMINISTRATORS/MANAGERS

110 Public Administrators - Officials and administrators
121 General Manager/Business Executive/Owner
122 Financial Administration or Management
123 Personnel & Labor Relations
124 Purchasing/Procurement/Buyers
125 Advertising and Public Relations
129 Administrator/Manager (not elsewhere classified)
141 Accountant & Auditor
142 Management Analysts
410 Marketing and Sales Occupations
450 Administrative Support Occupations, including Clerical (Bookkeepers, word processors, adjusters, collectors)

TECHNICAL/SCIENTIFIC

160 Engineers, Surveyors, Architects
171 Computer Scientist, Systems Analysts, Programmer
172 Operations & Systems Researchers and Analysts
173 Mathematicians and Statisticians
180 Life and Physical Scientist/Researcher/Technician

SOCIAL SCIENCE/EDUCATION/LAW

190 Social Scientists/Researchers/Planners
191 Economists & Related
200 Social Workers
506 Child Care Workers
203 Recreation and Sports Workers
204 Religious Workers/Clergy
210 Lawyer, Judge, Law-related
220 Teachers/Faculty
240 Counselors
250 Librarians, Archivists, & Curators

HEALTH RELATED

260 Health Practitioners/Technologists
270 Physicians, Dentists, Veterinarians
290 Registered Nurses

WRITERS/ARTISTS/SERVICES

330 Editors, Reporters, Public Relations Specialists and Announcers
398 Technical Writers
325 Artists
500 Service Occupations
510 Protective Service: Law Enforcement and Fire Prevention, Security

OTHER

910 Military
990 Other

BUSINESS AND INDUSTRY CODES

A Agriculture, Forestry & Fishing
C Construction
D Manufacturing
E Transportation/Communications Services
F Wholesale Trade/Retail Trade
H Financial Institutions/Insurance/Real Estate

SERVICES

I 700 Hotels/Lodging/Restaurant
I 731 Advertising & Public Relations Services
I 737 Computer/Data Processing Services
I 780 Entertainment and Recreation Services
I 800 Health/Medical Services
I 810 Legal Services
I 821 Education (Elementary,Secondary, College/University, Day care/pre-school)
I 823 Libraries, Museums, galleries
I 830 Social Services
I 860 Associations/Membership Organizations
I 871 Engineering/Architectural Services
I 872 Accounting, Auditing, Bookkeeping
I 873 Research & Testing Services
I 874 Management/Business consulting
J Public Administration
K Other

Please return this form in the envelope with your completed survey.

V. Educational Status

Q47. Since graduating from GMU . . . (Check the appropriate boxes.)

- ☐ I have not been enrolled in graduate or professional school (go on to question #51)
- ☐ I am currently enrolled in graduate or professional school **full-time**
- ☐ I am currently enrolled in graduate or professional school **part-time**
- ☐ I have obtained a master's, doctoral, professional degree (e.g. law) or certificate (e.g. teaching)
- ☐ Other: (please identify)_____

Q48. If you are currently enrolled in graduate or professional school or have obtained an advanced degree or certificate, circle the number representing the appropriate degree/certificate.

1. technical or teaching certificate
2. second bachelor's degree
3. master's degree
4. professional degree (law, medicine, etc.)
5. doctoral degree
6. Other: _____

Q49. Where did you or are you attending graduate/professional school?

1. at GMU
2. an institution in Virginia, not GMU
3. an institution outside Virginia

Q50. How well did GMU prepare you for entry level graduate/professional work?

1. Very well
2. Well
3. Not very well

VI. Overall Satisfaction

Q51. What particular type of information or guidance was or would have been helpful from an academic advisor?

_____

_____

Q52. Did you experience a sense of community, a feeling of belonging, at GMU?

1. Yes —> If yes, in what ways? _____
2. No _____

Q53. Many higher education institutions, particularly metropolitan campuses, are rethinking their missions. What do you think colleges should do to prepare students for the 21st Century? _____

_____

_____

Q54. If you were to do it all over again, would you attend GMU? (Circle one number and then respond)

1. Definitely Yes — **Why would you attend GMU again?** _____
2. Probably Yes _____

3. Probably No — **Why wouldn't you attend GMU again?** _____
4. Definitely No _____

Q55. Please describe your feelings/opinions regarding the ethnic diversity of GMU's campus: _____

_____

VII. Departmental Experience

Note. Your responses to the following questions will be sent directly to your department. Your name however, will not be included with these comments.

Q56. What was your GMU academic major? _____

Q57. Which of the following baccalaureate degrees did you receive in your major field? (Circle one number)

1. B.A.
2. B.S.
3. B.F.A.
4. B.S.N.
5. B.M.
6. B.S.Ed.
7. B.I.S.

Q58. While you were at George Mason, were there any faculty or staff who were outstanding teachers, advisors and/or mentors? (If yes, please name and please identify their strengths)

_____

_____

Q59. What course or courses in your major have been particularly useful or beneficial to you?

Please identify: _____

_____

Q60. Why was this course(s) beneficial? _____

_____

Q61. Overall, please rate the quality of the faculty in your department.

1. Excellent
2. Above Average
3. Average
4. Below Average
5. Poor

Q62. Overall, how satisfied were you with the academic department from which you graduated?

1. Very Satisfied
2. Satisfied
3. Dissatisfied
4. Very Dissatisfied

Q63. Please comment on the strengths and limitations of your academic department or major program.

_____

_____

_____

Q64. What about your education at GMU helped prepare you for life after graduation?

_____

_____

_____

Thank you for sharing your impressions of your GMU experience.

To return this survey, fold into thirds and place in the business reply envelope.
No postage is necessary.

Appendix C
Survey Production and Mailing Costs
Gold and Bronze Projects

The Gold Project

Survey Production (1st mailing and follow-up):		
8 ½" x 11" paper (2 sheets)	.08/sheet x 2 x 4,500	720.00
Photocopying	.09 per survey x 4,500	405.00
Saddle stitching survey (i.e. staple in booklet format)	.10 per survey x 4,500	450.00
No 1st mailing cover letter	not applicable	0.00
No 2nd cover letter (Self Inking Stamp Purchased)	12.95 per stamp, one stamp purchased	12.95
Postcard Costs:		
Index weight paper	.12 x 625 (4 postcards per index sheet)	75.00
Photocopying	1,250 (printing on 2 sides) x .0225	28.13
Mailing Preparation:		
Outgoing envelope (1st and second mailings)	2.81 per 100 (6x9 clasp envelope) x 45	126.00
Business Reply Envelope	8.65 per 500 x 9	77.85
Postal Charges:		
1st survey mailing (first class 1 oz. rate)	2,500 x .32	800.00
postcard (first class mail)	2,500 x .20	500.00
2nd survey mailing (third class)	1,850 x .266	492.10
Total costs:		***3,657.03***

The Bronze Project

Survey Production (1st mailing and follow-up):	Cost Calculation	Total Cost
11" x 17" paper	.14 x 4,500	630.00
photocopying	.0225 x 2 sides x 4,500	832.50
1st cover letter	.0225 x 2,500 (no paper costs*)	56.25
2nd cover letter	.0225 x 2,000 (no paper costs*)	45.00
Postcard Costs:		
Index weight paper	.12 x 625 (4 postcards per index sheet)	75.00
Photocopying of postcard	1,250 (printing on 2 sides) x .0225	28.13
Mailing Preparation:		
Business reply envelope for survey return	4,500	77.85
Outgoing graphically designed envelope	4,500	250.00
Postal Charges:		
1st survey mailing (bulk/third class)	2,500 x .266	665.00
Post card (bulk/third class)	2,500 x .266	665.00
2nd survey mailing (bulk/third class)	1,850 x .266	492.10
Total Costs:		***3,816.83***

*There is no paper charge for letters printed on white paper.